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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/783,112	02/14/2001	Josh N. Hogan	10971806-3	2220

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HEWLETT-PACKARD COMPANY  
Intellectual Property Administration  
P.O. Box 272400  
Fort Collins, CO 80527-2400

EXAMINER
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GYORFI, THOMAS A

ART UNIT	PAPER NUMBER
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2135

DATE MAILED: 10/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/783,112

Applicant(s)

HOGAN, JOSH N.

Examiner

Tom Gyorf

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 July 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 10 and 26-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 10 and 26-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

### **DETAILED ACTION**

1. Claims 1, 10, and 26-28 remain for examination. The correspondence filed 7/22/05 did not add, amend, or cancel any claims.

### ***Response to Arguments***

2. Applicant's arguments with respect to claims 26-28 have been considered but are moot in view of the new ground(s) of rejection.

3. It is noted that Applicant has again refrained from filing a terminal disclaimer in response to the double patenting rejections of claims 1 and 26 in the previous Office Action. Accordingly, those rejections are maintained.

### ***Allowable Subject Matter***

4. The indicated allowability of claims 1, 10, and 26 is withdrawn in view of the newly discovered reference(s) to Chuang and Kangas. Rejections based on the newly cited reference(s) follow.

### ***Claim Objections***

5. Upon further examination, claim 1 is again objected to under 37 CFR 1.75 as being a substantial duplicate of claim 26. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

***Double Patenting***

6. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

7. Claims 1 and 26 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 8 of U.S. Patent No. 6,252,961. Although the conflicting claims are not identical, they are not patentably distinct from each other because the patent claim recites every element from the claims of the instant application except for two details. With regards to the ECC block that is coded according to an error code correction method, this element is a tautology that adds no new matter over the claim in the instant application; a block of ECC-coded data must, by definition, be encoded according to an error code correction method. With regards to the encryption mask being encoded according to the same error code correction method, note that the patent teaches that the disclosed system would function correctly even if the encryption mask contained errors (Hogan, column 5, lines 60-63). Therefore, it would have been obvious to one of ordinary skill in the art to omit

this step, as it would not disrupt the functioning of the remaining elements while simplifying the overall design. See *In re Karlson* 136 USPQ 184 (CCPA 1963)

***Claim Rejections - 35 USC § 103***

8. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

9. Claims 1, 10, and 26-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chuang (U.S. Patent 6,003,151), and further in view of Kangas (U.S. Patent 5,355,412).

Referring to claims 1 and 26:

Chuang discloses a system comprising a computer bus (col. 7, lines 10-15), a host processor [programmed to perform error code correction] (e.g. col. 4, lines 45-50), and a drive for providing an encryption mask, the drive performing a bitwise XOR of an encryption mask and a block of ECC-encoded data and the drive providing the [encrypted] block to the computer bus, whereby an [encrypted] block can be sent to the host processor (col. 3, lines 1-30).

Chuang does not explicitly teach that the output of the bitwise XOR is an encrypted block, nor that the host processor then performs error code correction on said encrypted block. However, Kangas teaches that one can XOR blocks ECC-encoded data (col. 2, lines 10-40), and that the host processor can then perform additional error code correction (col. 3, line 50 – col. 4, line 20). It would have been obvious to one of

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ordinary skill in the art at the time the invention was made to use XOR as an encryption method in the system disclosed by Chaung. The motivation for doing so would be to encrypt error-corrected coded data in such a way that one to preserve the error-correction information, so that one can perform additional operations on the data without requiring the user to open and decrypt the private data (Kangas, col. 1, lines 30-35).

Referring to claims 27 and 28:

Chuang discloses a drive comprising a reader and a controller programmed to perform a bitwise XOR of an [encryption] mask and a block of ECC-encoded data (Figures 3 and 5, and col.3, lines 1-30) and the controller being further programmed to output the encrypted block (col. 4, lines 45-50).

Chuang does not explicitly teach that the output of the bitwise XOR is an encrypted block. However, Kangas teaches that one can XOR blocks ECC-encoded data (col. 2, lines 10-40). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use XOR as an encryption method in the system disclosed by Chaung. The motivation for doing so would be to encrypt error-corrected coded data in such a way that one to preserve the error-correction information, so that one can perform additional operations on the data without requiring the user to open and decrypt the private data (Kangas, col. 1, lines 30-35).

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10. Claims 27 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hung et al. (U.S. Patent 5,343,525) and further in view of Kangas (U.S. Patent 5,355,412).

Referring to claims 27 and 28:

Hung teaches a drive comprising a reader (col. 3, lines 5-10) and a controller programmed to perform a bitwise XOR of an encryption mask and a block of [ECC-encoded] data, a product of the bitwise XOR being an encrypted block, the controller further being programmed to output the encrypted block (col. 2, lines 30-60). Hung places no limitations on the type of data that can be encoded, and thus does not explicitly teach that ECC-encoded data can be encrypted. However, Kangas teaches that a block of error-corrected code can be encrypted (Kangas, col. 2, lines 10-40). It would have been obvious to one of ordinary skill in the art at the time the invention was made to permit the encryption of error-corrected data. The motivation for doing so would be to encrypt error-corrected coded data in such a way that one to preserve the error-correction information, so that one can perform additional operations on the data without requiring the user to open and decrypt the private data (Kangas, col. 1, lines 30-35).

***Conclusion***

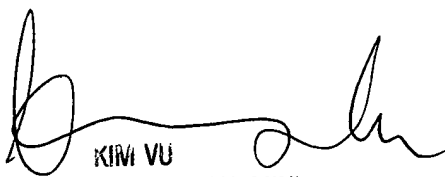
11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: "Joint Encryption and Error Correction Schemes" ©1984 IEEE.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tom Gyorfi whose telephone number is (571) 272-3849. The examiner can normally be reached on 8:30am - 5:00pm Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Vu can be reached on (571) 272-3859. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TAG  
9/29/05

  
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